

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

<i>In re</i> Application of:)	Confirmation No. 9944
)	
CHOO <i>et al.</i>)	Group Art Unit: 1648
)	
Serial No.: 10/580,050)	Examiner: TBA
)	
I.A. Filed: November 19, 2004)	Atty. Docket No. 51835-US-PCT

For: **METHODS AND REAGENTS FOR TREATING, PREVENTING,
AND DIAGNOSING BUNYAVIRUS INFECTION**

PETITION UNDER 37 C.F.R. § 1.181 TO WITHDRAW
HOLDING OF ABANDONMENT

U.S. Patent and Trademark Office
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Dear Sir:

Applicants petition the Director under 37 C.F.R. § 1.181 to withdraw the holding of abandonment of the application referenced above as set forth in the Notification of Abandonment mailed May 14, 2009. Applicants believe no fee is due in connection with this petition. If a fee is due, please charge our Deposit Account No. 19-0733.

Statement of Facts

1. The present application (Serial No. 10/580,050) is a national phase application of PCT/US2004/039333 filed November 19, 2004. Serial No. 10/580,050 was filed by express mail on May 19, 2006.

2. A Notification of Missing Requirements requesting an executed declaration was mailed on January 16, 2007. The executed declaration was filed by express mail on August 10, 2007 together with payment for a five-month extension of time.

3. On January 31, 2008 Applicants filed by express mail a preliminary amendment and paper and computer readable forms of a sequence listing. The preliminary amendment inserted sequence identifiers into the specification and directed entry of the paper copy of the sequence listing into the specification. Exhibit 1 is a copy of Applicants' sequence listing transmittal letter downloaded from PAIR. The transmittal letter bears a U.S. Patent and Trademark Office receipt stamp of January 31, 2008.

4. Exhibit 2 is a copy of a SCORE placeholder sheet for IFW content downloaded from PAIR. The placeholder sheet is dated January 31, 2008 and indicates receipt of the computer readable form of the sequence listing.

5. Exhibit 3 is a printout of PAIR's "Supplemental Content" view for this application.

6. Exhibit 4 is a copy of the contents of the sequence listing downloaded from the Supplemental Content. tab in PAIR

7. A Notice to Comply with sequence listing requirements was mailed on February 18, 2009. The notice asserted that a computer readable form of the sequence listing had not been submitted. The Notice provided a two-month initial deadline to respond (*i.e.*, until April 18,

2009). The Notice also indicated that extensions of time were available under 37 C.F.R. § 1.136 up to six months from the mailing date of the notice (*i.e.*, until August 18, 2009).

8. On March 20, 2009 Applicants filed by express mail a response to the Notice to Comply. The response noted that the computer readable form of the sequence listing had been filed on January 31, 2008. The response also stated that copies of the sequence listing and preliminary amendment filed on January 31, 2008 were being resubmitted; however, PAIR does not indicate that the sequence listing and preliminary amendment were re-submitted with the response.

9. A Notification of Abandonment was mailed on May 14, 2009, less than one month after the initial deadline for responding to the Notice to Comply. The Notification states that the application is abandoned because “[t]he sequence requirements still haven’t been met.”

Point to be Reviewed

The point to be reviewed is whether the holding of abandonment should be withdrawn because the computer readable form of the sequence listing was filed on January 31, 2008.

Action Requested

Applicant requests that the holding of abandonment of this application be withdrawn.

Argument

The Notification of Abandonment appears to have been issued in error. As an initial matter, the Notification of Abandonment was mailed before the end of the statutory period for responding to the Notice to Comply.

Moreover, the Notice to Comply itself was erroneously issued. First, the U.S. Patent and Trademark Office's own records indicate that the computer readable form of the sequence listing was filed on January 31, 2008 (Exhibit 2). Second, the computer readable form of the sequence listing actually is present under the "Supplemental Content" tab for this application in PAIR (Exhibits 3 and 4). Third, the contents of the computer readable form downloaded from PAIR appears to contain all 191 sequences present in the paper form of the sequence listing filed on January 31, 2008 (Exhibit 4).

Applicants respectfully request that the holding of abandonment of this application be withdrawn.

Respectfully submitted,

BANNER & WITCOFF, LTD.

/Lisa M. Hemmendinger/

Date: May 27, 2009

By: _____

Lisa M. Hemmendinger
Registration No. 42,653

Customer No. 22907

Exhibit 1

Express Mail Label No.: ED 954551195 USDate: January 31, 2008

IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

In Re Application of: Qui-Lim Choo

U.S. Appl. No.: 10/580,050

Intl. Appln. No.: PCT/US04/39333

I.A. Filing Date: 11/19/2004

Priority Date: 11/19/2003

Title: METHODS AND REAGENTS FOR
TREATING, PREVENTING AND
DIAGNOSING *BUNYAVIRUS*
INFECTION

Confirmation No.: 7391

Group Art Unit: To Be Assigned

Examiner: To Be Assigned

TRANSMITTAL LETTERMail Stop PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed herewith are the following documents to complete the above-identified application:

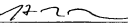
1. **TRANSMITTAL OF SEQUENCE LISTING INCLUDING:**
 - a. Statements Under 37 C.F.R. 1.821(f-g), including statement specifically directing entry of the sequence listing into the application.
 - b. Paper Copy of the Sequence Listing (60 pages).
 - c. Compact Disk Containing CRF Copy of Sequence Listing (1 CD).
2. **PRELIMINARY AMENDMENT.**
3. **RETURN RECEIPT POSTCARD.**

The Commissioner is hereby authorized to charge any deficiency in fees or credit any overpayment associated with this communication and which may be required under 37 C.F.R. §§ 1.16 and 1.17 to Deposit Account No. 03-1664.

Respectfully submitted,

NOVARTIS VACCINES AND DIAGNOSTICS, INC.

Dated: January 31, 2008

By: 
Helen Lee
Registration No. 39,270

Customer No. 27476
NOVARTIS VACCINES AND DIAGNOSTICS, INC.
Corporate Intellectual Property – R338
P.O. Box 8097
Emeryville, CA 94662-8097
Telephone: (510) 923-2192
Facsimile: (510) 655-3542

SCORE Placeholder Sheet for IFW Content

Application Number: 10580050

Document Date: 01/31/2008

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

- **Sequence Listing**

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

To access the documents in the SCORE database, refer to instructions developed by SIRA.

At the time of document entry (noted above):

- Examiners may access SCORE content via the eDAN interface.
- Other USPTO employees can bookmark the current SCORE URL (<http://es/ScoreAccessWeb/>).
- External customers may access SCORE content via the Public and Private PAIR interfaces.



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10/580,050

Methods and reagents for treating, preventing and diagnosing bunyavirus infection



Select New Case	Application Data	Transaction History	Image File Wrapper	Continuity Data	Address & Attorney/Agent	Supplemental Content	Display References
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Supplemental Content - Sequences

Use this page to view or retrieve a specific version of the Sequence Listing submitted for this application.

[Previous](#)

Version	Sub-Version	Number of Sequences	Sequence Name	Item Size	Item ID	Download
1	0	0	US10580050	91.293	09323b6780b376d2	

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- Call the Patent Electronic Business Center at (866) 217-9197 (toll free) or e-mail EBC@uspto.gov for specific questions about Patent Application Information Retrieval (PAIR).
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- If you experience technical difficulties or problems with this application, please report them via e-mail to [Electronic Business Support](#) or call 1 800-786-9199.

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SEQUENCE LISTING

Exhibit 4

<110> CHOO, Qui-Lim
HOUGHTON, Michael
SCOTT, Elizabeth
WEINER, Amy

<120> METHODS AND REAGENTS FOR TREATING, PREVENTING AND DIAGNOSING
BUNYAVIRUS INFECTION

<130> 21454

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<141> 2006-05-19

<150> PCT/US04/039333
<151> 2004-11-19

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 85 90 95
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Tyr Arg Asn Asp Val Pro Phe Val Asp Ile Ile Leu Asp Ile Arg Pro
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Glu Val Asp Pro Leu Thr Ile Asp Ala Pro His Ile Thr Pro Asp Asn
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Tyr Leu Tyr Ile Asn Asn Val Leu Tyr Ile Ile Asp Tyr Lys Val Ser
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Val Ser Asn Glu Ser Ser Val Ile Thr Tyr Asp Lys Tyr Tyr Glu Leu
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1925		1930		1935
Tyr Gln	Ile His Ser His Glu	Ser Ile Thr Arg Arg	Asn Glu Glu	
1940		1945		1950
His Met	Ala Ile Arg Thr Arg	Ile Tyr Asn Glu Ile	Thr Pro Val	
1955		1960		1965
Cys Val	Val Asn Val Ala Glu	Val Asp Gly Asp Gln	Arg Ile Leu	
1970		1975		1980
Ile Arg	Ser Leu Asp Tyr Leu	Asn Asn Asp Ile Phe	Ser Leu Ser	
1985		1990		1995
Arg Ile	Lys Val Gly Leu Asp	Glu Phe Ala Thr Ile	Lys Lys Ala	
2000		2005		2010
His Phe	Ser Lys Met Val Ser	Phe Glu Gly Pro Pro	Ile Lys Thr	
2015		2020		2025
Gly Leu	Leu Asp Leu Thr Glu	Leu Met Lys Ser Gln	Asp Leu Leu	
2030		2035		2040
Asn Leu	Asn Tyr Asp Asn Ile	Arg Asn Ser Asn Leu	Ile Ser Phe	
2045		2050		2055
Ser Lys	Leu Ile Cys Cys Glu	Gly Ser Asp Asn Ile	Asn Asp Gly	
2060		2065		2070
Leu Glu	Phe Leu Ser Asp Asp	Pro Met Asn Phe Thr	Glu Gly Glu	
2075		2080		2085
Ala Ile	His Ser Thr Pro Ile	Phe Asn Ile Tyr Tyr	Ser Lys Arg	
2090		2095		2100
Gly Glu	Arg His Met Thr Tyr	Arg Asn Ala Ile Lys	Leu Leu Ile	
2105		2110		2115
Glu Arg	Glu Thr Lys Ile Phe	Glu Glu Ala Phe Thr	Phe Ser Glu	
2120		2125		2130
Asn Gly	Phe Ile Ser Pro Glu	Asn Leu Gly Cys Leu	Glu Ala Val	
2135		2140		2145
Val Ser	Leu Ile Lys Leu Leu	Lys Thr Asn Glu Trp	Ser Thr Val	
2150		2155		2160

Ile Asp Lys Cys Ile His Ile Cys Leu Ile Lys Asn Gly Met Asp
 2165 2170 2175

His Met Tyr His Ser Phe Asp Val Pro Lys Cys Phe Met Gly Asn
 2180 2185 2190

Pro Ile Thr Arg Asp Met Asn Trp Met Met Phe Arg Glu Phe Ile
 2195 2200 2205

Asn Ser Leu Pro Gly Thr Asp Ile Pro Pro Trp Asn Val Met Thr
 2210 2215 2220

Glu Asn Phe Lys Lys Lys Cys Ile Ala Leu Ile Asn Ser Lys Leu
 2225 2230 2235

Glu Thr Gln Arg Asp Phe Ser Glu Phe Thr Lys Leu Met Lys Lys
 2240 2245 2250

Glu Gly Gly Arg Ser Asn Ile Glu Phe Asp
 2255 2260

<210> 7
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Antisense primer derived from M segment of LACV genome

<400> 7
 cgaatcaacaa tccaatgata acaag 25

<210> 8
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Sense primer derived from M segment of LACV genome

<400> 8
 tggaaatggc atcgagaata aa 22

<210> 9
 <211> 39
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Probe derived from M segment of LACV genome

<400> 9
 attatctcac ctgtatcttg aattatgctg taagctggg 39

<210> 10
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Sense primer derived from S segment of LACV genome

 <400> 10
 gtctcagcac gagttgatca gaa 23

 <210> 11
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Antisense primer derived from S segment of LACV genome

 <400> 11
 aatggtcagc gggtagaatt tg 22

 <210> 12
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from S segment of LACV genome

 <400> 12
 tgggttagga tgggacagtg ggcca 25

 <210> 13
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Sense primer derived from L segment of LACV genome

 <400> 13
 aaagtcgggc ttgacgaatt t 21

 <210> 14
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Antisense primer derived from L segment of LACV genome

<400> 14
cggacagaaa ctctaacccta tca 23

<210> 15
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from L segment of LACV genome

<400> 15
cccccaatta agacagggt cctcg 25

<210> 16
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide specific for LACV sequence

<400> 16
catgaggcat tcaaattagg ttcta 25

<210> 17
<211> 174
<212> PRT
<213> La Crosse virus

<400> 17
Val Met Cys Lys Ser Lys Gly Pro Ala Ser Ile Leu Ser Ile Ile Thr
1 5 10 15
Ala Val Leu Val Leu Thr Phe Val Thr Pro Ile Asn Ser Met Val Leu
20 25 30
Gly Glu Ser Lys Glu Thr Phe Glu Leu Glu Asp Leu Pro Asp Asp Met
35 40 45
Leu Glu Met Ala Ser Arg Ile Asn Ser Tyr Tyr Leu Thr Cys Ile Leu
50 55 60
Asn Tyr Ala Val Ser Trp Gly Leu Val Ile Ile Gly Leu Leu Ile Gly
65 70 75 80
Leu Leu Phe Lys Lys Tyr Gln His Arg Phe Leu Asn Val Tyr Ala Met
85 90 95
Tyr Cys Glu Glu Cys Asp Met Tyr His Asp Lys Ser Gly Leu Lys Arg
100 105 110
His Gly Asp Phe Thr Asn Lys Cys Arg Gln Cys Thr Cys Gly Gln Tyr
115 120 125

Glu Asp Ala Ala Gly Leu Met Ala His Arg Lys Thr Tyr Asn Cys Leu
130 135 140

Val Gln Tyr Lys Ala Lys Trp Met Met Asn Phe Leu Ile Ile Tyr Ile
145 150 155 160

Phe Leu Ile Leu Ile Lys Asp Ser Ala Ile Val Val Gln Ala
165 170

<210> 18
<211> 968
<212> PRT
<213> La Crosse virus

<400> 18
Ala Gly Thr Asp Phe Thr Thr Cys Leu Glu Thr Glu Ser Ile Asn Trp
1 5 10 15

Asn Cys Thr Gly Pro Phe Leu Asn Leu Gly Asn Cys Gln Lys Gln Gln
20 25 30

Lys Lys Glu Pro Tyr Thr Asn Ile Ala Thr Gln Leu Lys Gly Leu Lys
35 40 45

Ala Ile Ser Val Leu Asp Val Pro Ile Ile Thr Gly Ile Pro Asp Asp
50 55 60

Ile Ala Gly Ala Leu Arg Tyr Ile Glu Glu Lys Glu Asp Phe His Val
65 70 75 80

Gln Leu Thr Ile Glu Tyr Ala Met Leu Ser Lys Tyr Cys Asp Tyr Tyr
85 90 95

Thr Gln Phe Ser Asp Asn Ser Gly Tyr Ser Gln Thr Thr Trp Arg Val
100 105 110

Tyr Leu Arg Ser His Asp Phe Glu Ala Cys Ile Leu Tyr Pro Asn Gln
115 120 125

His Phe Cys Arg Cys Val Lys Asn Gly Glu Lys Cys Ser Ser Ser Asn
130 135 140

Trp Asp Phe Ala Asn Glu Met Lys Asp Tyr Tyr Ser Gly Lys Gln Thr
145 150 155 160

Lys Phe Asp Lys Asp Leu Asn Leu Ala Leu Thr Ala Leu His His Ala
165 170 175

Phe Arg Gly Thr Ser Ser Ala Tyr Ile Ala Thr Met Leu Ser Lys Lys
180 185 190

Ser Asn Asp Asp Leu Ile Ala Tyr Thr Asn Lys Ile Lys Thr Lys Phe
195 200 205

Pro Gly Asn Ala Leu Leu Lys Ala Ile Ile Asp Tyr Ile Ala Tyr Met

210					215					220					
Lys	Ser	Leu	Pro	Gly	Met	Ala	Asn	Phe	Lys	Tyr	Asp	Glu	Phe	Trp	Asp
225					230					235					240
Glu	Leu	Leu	Tyr	Lys	Pro	Asn	Pro	Ala	Lys	Ala	Ser	Asn	Leu	Ala	Arg
				245					250					255	
Gly	Lys	Glu	Ser	Ser	Tyr	Asn	Phe	Lys	Leu	Ala	Ile	Ser	Ser	Lys	Ser
			260					265					270		
Ile	Lys	Thr	Cys	Lys	Asn	Val	Lys	Asp	Val	Ala	Cys	Leu	Ser	Pro	Arg
		275					280				285				
Ser	Gly	Ala	Ile	Tyr	Ala	Ser	Ile	Ile	Ala	Cys	Gly	Glu	Pro	Asn	Gly
	290					295					300				
Pro	Ser	Val	Tyr	Arg	Lys	Pro	Ser	Gly	Gly	Val	Phe	Gln	Ser	Ser	Thr
305					310					315					320
Asp	Arg	Ser	Ile	Tyr	Cys	Leu	Leu	Asp	Ser	His	Cys	Leu	Glu	Glu	Phe
				325					330					335	
Glu	Ala	Ile	Gly	Gln	Glu	Glu	Leu	Asp	Ala	Val	Lys	Lys	Ser	Lys	Cys
			340					345					350		
Trp	Glu	Ile	Glu	Tyr	Pro	Asp	Val	Lys	Leu	Ile	Gln	Glu	Gly	Asp	Gly
		355					360					365			
Thr	Lys	Ser	Cys	Arg	Met	Lys	Asp	Ser	Gly	Asn	Cys	Asn	Val	Ala	Thr
	370					375					380				
Asn	Arg	Trp	Pro	Val	Ile	Gln	Cys	Glu	Asn	Asp	Lys	Phe	Tyr	Tyr	Ser
385					390					395					400
Glu	Leu	Gln	Lys	Asp	Tyr	Asp	Lys	Ala	Gln	Asp	Ile	Gly	His	Tyr	Cys
			405						410					415	
Leu	Ser	Pro	Gly	Cys	Thr	Thr	Val	Arg	Tyr	Pro	Ile	Asn	Pro	Lys	His
			420					425					430		
Ile	Ser	Asn	Cys	Asn	Trp	Gln	Val	Ser	Arg	Ser	Ser	Ile	Ala	Lys	Ile
		435					440					445			
Asp	Val	His	Asn	Ile	Glu	Asp	Ile	Glu	Gln	Tyr	Lys	Lys	Ala	Ile	Thr
	450					455					460				
Gln	Lys	Leu	Gln	Thr	Ser	Leu	Ser	Leu	Phe	Lys	Tyr	Ala	Lys	Thr	Lys
465					470					475					480
Asn	Leu	Pro	His	Ile	Lys	Pro	Ile	Tyr	Lys	Tyr	Ile	Thr	Ile	Glu	Gly
			485						490				495		
Thr	Glu	Thr	Ala	Glu	Gly	Ile	Glu	Ser	Ala	Tyr	Ile	Glu	Ser	Glu	Val
			500				505					510			
Pro	Ala	Leu	Ala	Gly	Thr	Ser	Ile	Gly	Phe	Lys	Ile	Asn	Ser	Lys	Glu

515					520					525					
Gly	Lys	His	Leu	Leu	Asp	Val	Ile	Ala	Tyr	Val	Lys	Ser	Ala	Ser	Tyr
530					535					540					
Ser	Ser	Val	Tyr	Thr	Lys	Leu	Tyr	Ser	Thr	Gly	Pro	Thr	Ser	Gly	Ile
545					550					555					560
Asn	Thr	Lys	His	Asp	Glu	Leu	Cys	Thr	Gly	Pro	Cys	Pro	Ala	Asn	Ile
				565					570					575	
Asn	His	Gln	Val	Gly	Trp	Leu	Thr	Phe	Ala	Arg	Glu	Arg	Thr	Ser	Ser
			580					585					590		
Trp	Gly	Cys	Glu	Glu	Phe	Gly	Cys	Leu	Ala	Val	Ser	Asp	Gly	Cys	Val
	595						600					605			
Phe	Gly	Ser	Cys	Gln	Asp	Ile	Ile	Lys	Glu	Glu	Leu	Ser	Val	Tyr	Arg
	610					615					620				
Lys	Glu	Thr	Glu	Glu	Val	Thr	Asp	Val	Glu	Leu	Cys	Leu	Thr	Phe	Ser
	625					630					635				640
Asp	Lys	Thr	Tyr	Cys	Thr	Asn	Leu	Asn	Pro	Val	Thr	Pro	Ile	Ile	Thr
				645					650					655	
Asp	Leu	Phe	Glu	Val	Gln	Phe	Lys	Thr	Val	Glu	Thr	Tyr	Ser	Leu	Pro
			660						665					670	
Arg	Ile	Val	Ala	Val	Gln	Asn	His	Glu	Ile	Lys	Ile	Gly	Gln	Ile	Asn
			675					680					685		
Asp	Leu	Gly	Val	Tyr	Ser	Lys	Gly	Cys	Gly	Asn	Val	Gln	Lys	Val	Asn
	690					695					700				
Gly	Thr	Ile	Tyr	Gly	Asn	Gly	Val	Pro	Arg	Phe	Asp	Tyr	Leu	Cys	His
	705					710					715				720
Leu	Ala	Ser	Arg	Lys	Glu	Val	Ile	Val	Arg	Lys	Cys	Phe	Asp	Asn	Asp
			725						730					735	
Tyr	Gln	Ala	Cys	Lys	Phe	Leu	Gln	Ser	Pro	Ala	Ser	Tyr	Arg	Leu	Glu
			740						745					750	
Glu	Asp	Ser	Gly	Thr	Val	Thr	Ile	Ile	Asp	Tyr	Lys	Lys	Ile	Leu	Gly
		755					760					765			
Thr	Ile	Lys	Met	Lys	Ala	Ile	Leu	Gly	Asp	Val	Lys	Tyr	Lys	Thr	Phe
			770				775					780			
Ala	Asp	Ser	Val	Asp	Ile	Thr	Ala	Glu	Gly	Ser	Cys	Thr	Gly	Cys	Ile
	785					790					795				800
Asn	Cys	Phe	Glu	Asn	Ile	His	Cys	Glu	Leu	Thr	Leu	His	Thr	Thr	Ile
			805						810					815	
Glu	Ala	Ser	Cys	Pro	Ile	Lys	Ser	Ser	Cys	Thr	Val	Phe	His	Asp	Arg

820					825					830						
Ile	Leu	Val	Thr	Pro	Asn	Glu	His	Lys	Tyr	Ala	Leu	Lys	Met	Val	Cys	
835					840					845						
Thr	Glu	Lys	Pro	Gly	Asn	Thr	Leu	Thr	Ile	Lys	Val	Cys	Asn	Thr	Lys	
850					855					860						
Val	Glu	Ala	Ser	Met	Ala	Leu	Val	Asp	Ala	Lys	Pro	Ile	Ile	Glu	Leu	
865					870					875					880	
Ala	Pro	Val	Asp	Gln	Thr	Ala	Tyr	Ile	Arg	Glu	Lys	Asp	Glu	Arg	Cys	
885					890					895						
Lys	Thr	Trp	Met	Cys	Arg	Val	Arg	Asp	Glu	Gly	Leu	Gln	Val	Ile	Leu	
900					905					910						
Glu	Pro	Phe	Lys	Asn	Leu	Phe	Gly	Ser	Tyr	Ile	Gly	Ile	Phe	Tyr	Thr	
915					920					925						
Phe	Ile	Ile	Ser	Ile	Val	Val	Leu	Leu	Val	Ile	Ile	Tyr	Val	Leu	Leu	
930					935					940						
Pro	Ile	Cys	Phe	Lys	Leu	Arg	Asp	Thr	Leu	Arg	Lys	His	Glu	Asp	Ala	
945					950					955					960	
Tyr	Lys	Arg	Glu	Met	Lys	Ile	Arg									
965																

<210> 19
 <211> 92
 <212> PRT
 <213> La Crosse virus

<400> 19																
Met	Met	Ser	His	Gln	Gln	Val	Gln	Met	Asp	Leu	Ile	Leu	Met	Gln	Gly	
1	5					10					15					
Ile	Trp	Thr	Ser	Val	Leu	Lys	Met	Gln	Asn	Tyr	Ser	Thr	Leu	Leu	Gln	
20					25					30						
Leu	Gly	Ser	Ser	Ser	Ser	Met	Pro	Gln	Arg	Pro	Arg	Leu	Leu	Ser	Arg	
35					40					45						
Val	Ser	Gln	Arg	Gly	Arg	Leu	Thr	Leu	Asn	Leu	Glu	Ser	Gly	Arg	Trp	
50					55					60						
Arg	Leu	Ser	Ile	Ile	Ile	Phe	Leu	Glu	Thr	Gly	Thr	Thr	Gln	Leu	Val	
65					70					75					80	
Thr	Thr	Ile	Leu	Pro	Ser	Thr	Asp	Tyr	Leu	Gly	Ile					
85								90								

<210> 20
 <211> 25

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Forward primer derived from M segment of the LACV genome

 <400> 20
 ttgtacaagc tgctggaact gactt 25

 <210> 21
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Forward primer derived from M segment of the LACV genome

 <400> 21
 tgtgggtgccc gctatgatac tt 22

 <210> 22
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Forward primer derived from M segment of the LACV genome

 <400> 22
 tgtgggtgccc gctatgatac 20

 <210> 23
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Forward primer derived from M segment of the LACV genome

 <400> 23
 ctgtgggtgcc cgctatgata c 21

 <210> 24
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Forward primer derived from M segment of the LACV genome

 <400> 24
 ctgtgggtgcc cgctatgata 20

<210> 25
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Forward primer derived from M segment of the LACV genome

 <400> 25
 totgtggtgc ccgctatgat a 21

 <210> 26
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Forward primer derived from M segment of the LACV genome

 <400> 26
 totgtggtgc ccgctatgat 20

 <210> 27
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Forward primer derived from M segment of the LACV genome

 <400> 27
 gtgtctgtgg tgcccgctat 20

 <210> 28
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Forward primer derived from M segment of the LACV genome

 <400> 28
 agacagtggc actgtgacca taa 23

 <210> 29
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Forward primer derived from M segment of the LACV genome

<400> 29
 agacagtggc actgtgacca taat 24

<210> 30
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Forward primer derived from M segment of the LACV genome

<400> 30
 aagacagtgg cactgtgacc ata 23

<210> 31
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Forward primer derived from M segment of the LACV genome

<400> 31
 aagacagtgg cactgtgacc ataa 24

<210> 32
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Forward primer derived from M segment of the LACV genome

<400> 32
 aagacagtgg cactgtgacc ataata 25

<210> 33
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Forward primer derived from M segment of the LACV genome

<400> 33
 gaagacagtg gcactgtgac cata 24

<210> 34
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Forward primer derived from M segment of the LACV genome

 <400> 34
 agaagacagt ggcactgtga ccata 25

 <210> 35
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 35
 ctgggccatt tttgaacctc gggaa 25

 <210> 36
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 36
 ctgggccatt tttgaacctc ggga 24

 <210> 37
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 37
 cactggggcca tttttgaacc tcgg 24

 <210> 38
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 38
 ctgggccatt tttgaacctc ggg 23

 <210> 39
 <211> 25

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 39
 tgaacctcgg gaattgccaa aagca 25

 <210> 40
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 40
 tgcactgggc catttttgaa cctcg 25

 <210> 41
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 41
 actgggccat ttttgacct cgga 25

 <210> 42
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 42
 actgggccat ttttgacct cggg 24

 <210> 43
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 43
 tgggccattt ttgaacctcg gga 23

<210> 44
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 44
 tgggccattt ttgaacctcg ggaat 25

 <210> 45
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 45
 cactgggccca tttttgaacc tcggg 25

 <210> 46
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 46
 tgggccattt ttgaacctcg ggaa 24

 <210> 47
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 47
 tgtgcaagtc gaaaggcct gca 23

 <210> 48
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

<400> 48
 catgtgcaag tcgaaagggc ctgc 24

<210> 49
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Probe derived from M segment of the LACV genome

<400> 49
 tcatgtgcaa gtcgaaaggg cctg 24

<210> 50
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Probe derived from M segment of the LACV genome

<400> 50
 atgtgcaagt cgaaagggcc tgca 24

<210> 51
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Probe derived from M segment of the LACV genome

<400> 51
 tcatgtgcaa gtcgaaaggg cctgc 25

<210> 52
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Probe derived from M segment of the LACV genome

<400> 52
 taaccgcaga agggtcatgc accg 24

<210> 53
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Probe derived from M segment of the LACV genome

 <400> 53
 ccgcagaagg gtcatgcacc g 21

 <210> 54
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 54
 aaccgcagaa gggtcatgca ccg 23

 <210> 55
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 55
 ataaccgcag aagggtcatg caccg 25

 <210> 56
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 56
 accgcagaag gggtcatgcac cg 22

 <210> 57
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 57
 cagaagggtc atgcaccggc tgt 23

 <210> 58
 <211> 21

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Probe derived from M segment of the LACV genome

 <400> 58
 cgcagaaggg tcatgcaccg g 21

 <210> 59
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Reverse primer derived from M segment of the LACV genome

 <400> 59
 agtcccttta actgagttgc aatgt 25

 <210> 60
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Reverse primer derived from M segment of the LACV genome

 <400> 60
 aaggtaaga ccagtaccgc agtaa 25

 <210> 61
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Reverse primer derived from M segment of the LACV genome

 <400> 61
 gtgtgcaacg ttaattcgca at 22

 <210> 62
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Reverse primer derived from M segment of the LACV genome

 <400> 62
 tgtggtgtgc aacgtaatt cg 22

<210> 63
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Reverse primer derived from M segment of the LACV genome

 <400> 63
 tcaattgtgg tgtgcaacgt ta 22

 <210> 64
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
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